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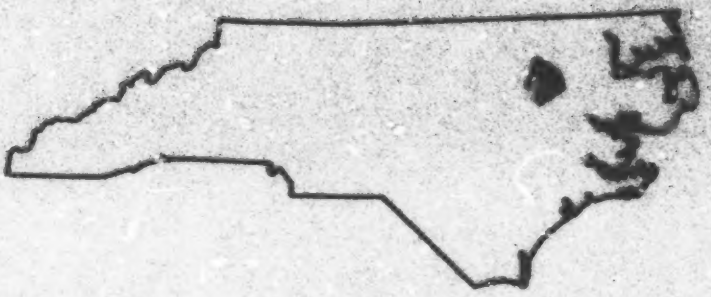
FLOOD INSURANCE STUDY

TOWN OF SPEED, NORTH CAROLINA

EDGECOMBE COUNTY



JULY 2, 1987

Federal Emergency Management Agency

COMMUNITY NUMBER - 370083

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NOTICE TO
FLOOD INSURANCE STUDY USERS

Communities participating in the National Flood Insurance Program (NFIP) have established repositories of flood hazard data for floodplain management and flood insurance purposes. This Flood Insurance Study (FIS) may not contain all data available within the repository. It is advisable to contact the community repository for any additional data.

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Flood Boundary and Floodway Map

PUBLISHED SEPARATELY:

Flood Insurance Rate Map

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FLOOD INSURANCE STUDY

TOWN OF SPEED,
EDGECOMBE COUNTY,
NORTH CAROLINA

1.0 INTRODUCTION

1.1 Purpose of Study

This Flood Insurance Study investigates the existence and severity of flood hazards in the Town of Speed and its extraterritorial jurisdiction, Edgecombe County, North Carolina, and aids in the administration of the National Flood Insurance Act of 1968 and the Flood Disaster Protection Act of 1973. This study has developed flood risk data for various areas of the community that will be used to establish actuarial flood insurance rates and assist the community in its efforts to promote sound flood plain management. Minimum flood plain management requirements for participation in the National Flood Insurance Program are set forth in the Code of Federal Regulations at 44 CFR, 60.3.

In some states or communities, flood plain management criteria or regulations may exist that are more restrictive or comprehensive than the minimum Federal requirements. In such cases, the more restrictive criteria take precedence and the state (or other jurisdictional agency) will be able to explain them.

This Flood Insurance Study was prepared by compiling existing hydrologic and hydraulic technical and scientific data prepared originally for purposes other than the National Flood Insurance Program. The data were identified as the best available at the time of compilation of this Flood Insurance Study and should depict the general conditions of the flooding sources with relative accuracy. The Federal Emergency Management Agency (FEMA) performed a cursory review and accepted the data as valid for purposes of this Flood Insurance Study and the National Flood Insurance Program. However, if better information is known to exist or has been developed since the date of this report, the information should be immediately forwarded to the Natural and Technological Hazards Division, FEMA, Atlanta, Georgia, for consideration for revision of this study.

1.2 Authority and Acknowledgements

The sources of authority for this Flood Insurance Study are the National Flood Insurance Act of 1968 and the Flood Disaster Protection Act of 1973.

The hydrologic and hydraulic analyses for this study were obtained from the "Deep Creek, Edgecombe County, North Carolina - Detailed Project Report" and "Deep Creek, Edgecombe County, North Carolina - Floodways for Existing Conditions and Improved Conditions" (References 1 and 2).

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1.3 Coordination

On August 8, 1986, the results of this Flood Insurance Study were reviewed and accepted at a final coordination meeting attended by representatives of the community and FEMA.

2.0 AREA STUDIED

2.1 Scope of Study

This Flood Insurance Study covers the incorporated area of the Town of Speed and its extraterritorial jurisdiction, Edgecombe County, North Carolina. The area of study is shown on the Vicinity Map (Figure 1).

The areas studied by detailed methods were selected based upon the extent and validity of available existing hydrologic and hydraulic data.

Flooding caused by overflow of Deep Creek within the extraterritorial limits, Knight Swamp from its mouth to about 1,000 feet upstream of the Chessie System, and Longs Branch from its mouth to the eastern corporate limits, was studied in detail. Flooding on the remainder of Knight Swamp within the extraterritorial limits was studied by approximate methods.

Approximate methods of analysis were used to study all remaining areas having a potential flood hazard that did not have detailed scientific or technical data available.

2.2 Community Description

The Town of Speed is located near the confluence of Deep Creek and Knight Swamp in the northeastern portion of Edgecombe County. It is surrounded by unincorporated areas of the county. The 1980 population of Speed was reported to be 95 a decrease from the 1970 population of 146 (Reference 3).

The major crops grown in the area are corn and soybeans. The only industry in the town is a granary and most of the residents commute to work in nearby cities. A major land use is pastureland.

The average annual values for several climatological phenomena are as follows: precipitation, 49 inches; snowfall, 5 inches; runoff, 13 inches; and, number of days with thunderstorms, 45. The growing season is about 200 days, and the average January and July temperatures are 39 degrees Fahrenheit (F.) and 80 degrees F., respectively.

Deep Creek rises in Halifax County and flows southerly through Edgecombe and Halifax Counties to its confluence with Fishing Creek, about 0.5 mile upstream of the Fishing Creek and Tar River confluence, which is about 8 miles above Tarboro. The drainage area of Deep Creek at County Route 1506, near Speed, is 85.9 square miles.

The soils of the basin are generally sandy loams, well-suited for general row-crop farming. The surface soils in the vicinity of Speed are predominantly silty sands. State Road 122 and the Chessie System extend north to south along the basin on the eastern side and pass through Speed.

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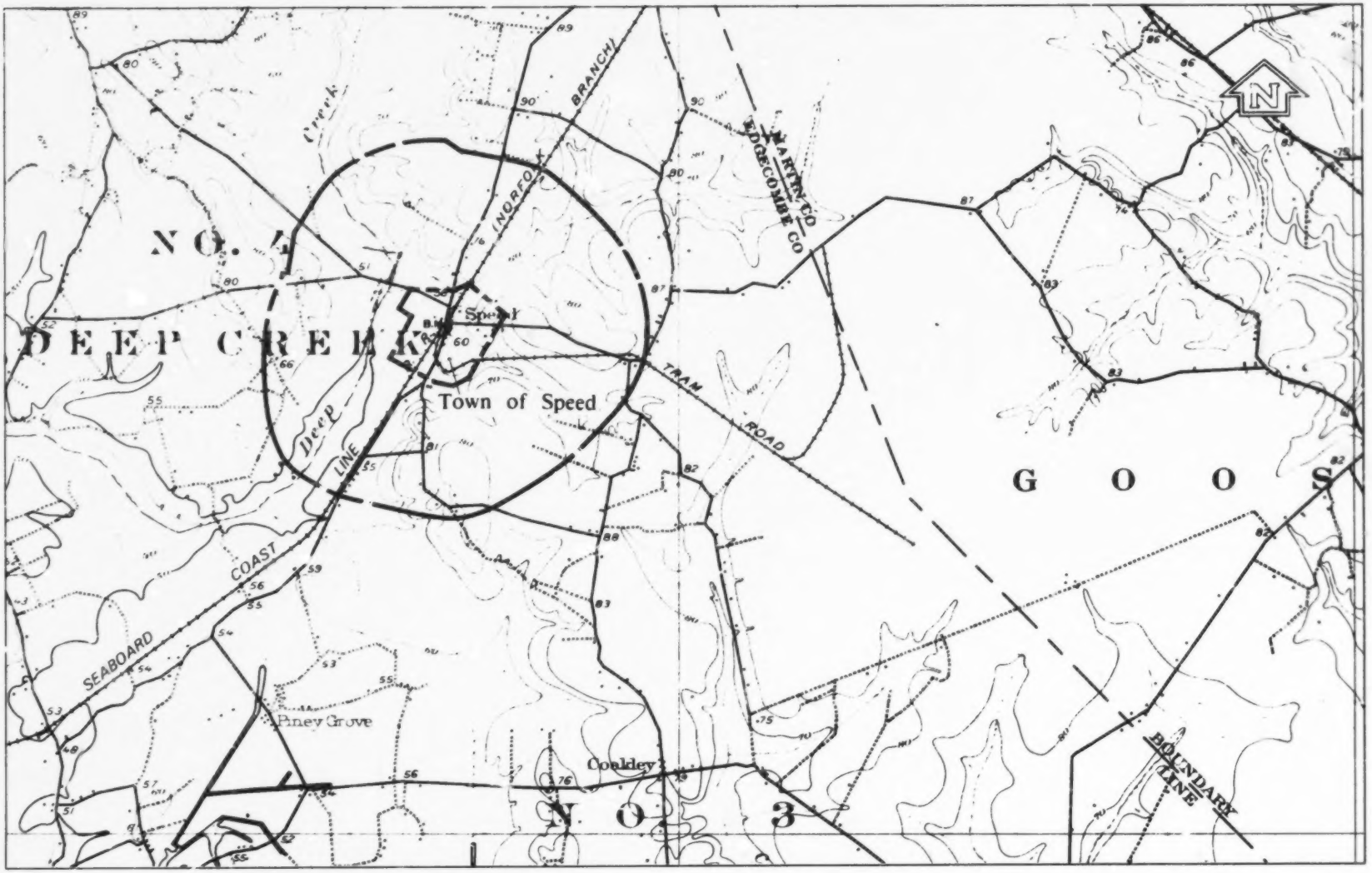

FIGURE 1

FEDERAL EMERGENCY MANAGEMENT AGENCY

TOWN OF SPEED, NC
(EDGECOMBE CO.)

APPROXIMATE SCALE
1 0 1 2 3 MILES

VICINITY MAP

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The lower 8-mile section of the Deep Creek basin is river terrace, and the area above that point is upland. The river terrace is relatively flat to gently sloping, without any swamp areas. The upland area has a flat valley and swamp between 1/2- and 3/4-mile wide, with an abrupt rise of 5 to 10 feet, and then gently sloping to moderately sloping lands. Near the headwaters of Deep Creek and its tributaries are very flat areas and pocosins. The land elevation varies from 30 feet near the mouth of Deep Creek to 125 feet near the headwaters. The bottom width of the channel along the lower 7.5 miles is about 30 feet, and the depth varies from 5 to 7 feet. The channel is barely discernible above this reach. The average slope of the stream along the lower 8.3 miles is about 3 feet per mile. The Deep Creek channel has many downed trees, limbs, and debris clogging it. The Knight Swamp and Longs Branch channels are about 5 feet wide and 5 feet deep and have slopes of about 6 feet per mile. These two tributaries to Deep Creek are on the north and south sides of Speed, respectively.

The basin surface deposits are of the Wicomico Marine Terrace and are immediately underlain by the Yorktown Formation of Miocene Age, containing marl, sand, and clay. The Tuscaloosa Formation, Cretaceous Age, outcrops in the lower 2 miles of Deep Creek and underlies the Yorktown in the rest of the basin. The Deep Creek basin is roughly parallel with, and about 15 miles east of, the Fall Line, a belt or zone of demarcation between the Coastal Plain and the Piedmont Plateau.

Portions of several farms are in the flood plain along Deep Creek near Speed. About 10 percent of the 100-year flood plain acreage is cropland. The flood plain at Speed contains two churches, the town hall and fire department, a community building, two general stores, and about 50 houses. Upstream of Speed, the Deep Creek flood plain consists of a swamp about 3/4-mile wide and minor acreages of cropland. The wooded swamp and seasonally-flooded bottom land hardwood areas consist principally of cypress, black gum, tupelo gum, water ash, sweet gum, red maple, and oak. The upland pine-hardwoods area (principally gum and oak) is interspersed with cropland on the higher flood plain areas away from the swamps. Fish and wildlife resources are of moderate value; usage of these resources for recreation is limited. Known archeological resources in the basin consist of three Indian village sites within the protection area of the dike. These sites contain archeological remains of several Indian cultures.

2.3 Principal Flood Problems

There have been three major floods in the past 35 years. The August 1967 flood (about 25-year frequency) forced about 100 persons to evacuate their homes, damaged 28 dwellings and one church, contaminated about 35 wells, and flooded the septic fields of about 45 residences, creating health and sanitation hazards to the inhabitants. The 1940 flood, the highest known to local residents, was about one foot higher than the August 1967 flood.

2.4 Flood Protection Measures

A levee designed to preclude overtopping from Deep Creek by the 100-year flood and to provide interior floodwater detention areas where no, or very

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minor, flood damages would result from internal accumulation of water from the 100-year flood has been built around the Town of Speed. Two drainage structures, one 48-inch diameter pipe and one 36-inch diameter pipe, both automatic floodgates with an emergency gate closure system, are provided from the detention areas through the levee.

The levee is about 7,700 feet long, from 2 feet to 9.5 feet high, with a top width of 10 feet, side slopes of 1-vertical to 3-horizontal, and a 25-foot berm outside and a 10-foot berm inside. The total protected area within the levee is about 145 acres, with a total inflow area of about 154 acres. Flood stage reduction is about 6.1 feet for a flood of 100-year frequency.

On Knight Swamp, the lower 2,800-foot section has been realigned and improved to a 20-foot bottom-width channel, about 7 feet deep. The reach between State Highway 122 and the Chessie System improved by constructing a 10-foot bottom-width channel, about 5 feet deep, to lower stages of floodwaters impinging on the dike. On Longs Branch, the lower 1,600 feet has been realigned and improved to a 15-foot bottom-width channel, about 7 feet deep. The 500-foot-long reach between the Chessie System and State Highway 122 was improved by constructing a 10-foot bottom-width channel, about 6 feet deep, to lower stages of floodwaters impinging on the dike. On Deep Creek, the stream has been widened on its east bank from its original 30-foot width to a width of about 80 feet, at depths varying from original grade to 1 foot below the original grade, for a distance of about 2,800 feet between mile 3.75 and mile 7.32.

3.0 ENGINEERING METHODS

For the flooding sources studied in detail in the community, standard hydrologic and hydraulic study methods were used to determine the flood hazard data required for this study. Flood events of a magnitude which are expected to be equaled or exceeded once on the average during any 10-, 50-, 100-, or 500-year period (recurrence interval) have been selected as having special significance for flood plain management and for flood insurance rates. These events, commonly termed the 10-, 50-, 100-, and 500-year floods, have a 10, 2, 1, and 0.2 percent chance, respectively, of being equaled or exceeded during any year. Although the recurrence interval represents the long term average period between floods of a specific magnitude, rare floods could occur at short intervals or even within the same year. The risk of experiencing a rare flood increases when periods greater than 1 year are considered. For example, the risk of having a flood which equals or exceeds the 100-year flood (1 percent chance of annual exceedence) in any 50-year period is approximately 40 percent (4 in 10), and, for any 90-year period, the risk increases to approximately 60 percent (6 in 10). The analyses reported herein reflect flooding potentials based on conditions existing in the community at the time of completion of this study. Maps and flood elevations will be amended periodically to reflect future changes.

3.1 Hydrologic Analyses

Hydrologic analyses were carried out to establish the peak discharge-frequency relationships for each flooding source studied in detail affecting the community.

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The probability and magnitude of flooding are based on analysis of rainfall and runoff characteristics correlated with regional flood characteristics, as reflected by stream gage records.

In cases when gage data are either not available or inadequate, synthetic peak discharge-frequency analyses were performed using the regional frequency procedure developed by "Statistical Methods in Hydrology" (Reference 4).

Elevations used to derive the profile for the 10-year flood are actually elevations for a 5-year flood and were used for zone determination purposes only.

Peak discharges for the 100-year flood of each flooding source studied in detail in the community are shown in Table 1.

TABLE 1 - SUMMARY OF DISCHARGES

FLOODING SOURCE AND LOCATION	DRAINAGE AREA (SQ MILES)	PEAK DISCHARGE (CFS) 10-YEAR	50-YEAR	100-YEAR	500-YEAR
DEEP CREEK at County Route 1506	85.9	N/A	N/A	5,500	N/A
LONGS BRANCH at confluence with Deep Creek	2.4	N/A	N/A	820	N/A
KNIGHT SWAMP at confluence with Deep Creek	5.4	N/A	N/A	1,200	N/A

3.2 Hydraulic Analyses

Analyses of the hydraulic characteristics of flooding from the sources studied were carried out to provide estimates of the elevations of the floods of the selected recurrence intervals.

Elevations of high-water marks from the August 1967 flood (approximately 25-year) were obtained along Deep Creek and used as a basis for determining Manning's "n" values to be used in computing water-surface profiles.

Water-surface profiles were prepared from backwater computations. The water-surface elevations of floods of the selected recurrence intervals were computed through use of the U.S. Army Corps of Engineers (COE) HEC-2 step-backwater program (Reference 5).

Roughness factors (Manning's "n") used in the hydraulic computations were chosen by engineering judgment and based on field observations of the streams and flood plain areas. Roughness values for the streams studied ranged from 0.035 to 0.045 for all floods.

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Starting water-surface elevations for Deep Creek were obtained by starting all backwater computations using the observed slope of the August 1967 flood.

Cross sections for the backwater analyses were obtained from the COE report (Reference 2).

Areas of the community protected by levees are subject to potential risk due to possible failure or overtopping of the levee. These areas were delineated by applying the 100-year elevation determined from the "levee-in-place" analysis.

Locations of selected cross sections used in the hydraulic analyses are shown on the Flood Profiles. For stream segments for which a floodway was computed (Section 4.2), selected cross-section locations are also shown on the Flood Boundary and Floodway Map.

Flood profiles were drawn showing the computed water-surface elevations for floods of the selected recurrence intervals.

The hydraulic analyses for this study are based only on the effects of unobstructed flow. The flood elevations shown on the profiles are, thus, considered valid only if hydraulic structures remain unobstructed, operate properly, and do not fail.

All elevations are referenced to the National Geodetic Vertical Datum of 1929 (NGVD). Elevation reference marks used in the study are shown on the maps.

4.0 FLOOD PLAIN MANAGEMENT APPLICATIONS

The National Flood Insurance Program encourages state and local governments to adopt sound flood plain management programs. Therefore, each Flood Insurance Study produces maps designed to assist communities in developing flood plain management measures.

4.1 Flood Boundaries

To provide a national standard without regional discrimination, the 1 percent annual chance (100-year) flood has been adopted by FEMA as the base flood for flood plain management purposes. The 0.2 percent annual chance (500-year) flood is employed to indicate additional areas of flood risk in the community. For each stream studied in detail, the 100- and 500-year flood plain boundaries have been delineated using the flood elevations determined at each cross section. Between cross sections the boundaries were interpolated using topographic maps at a scale of 1:24000 with a contour interval of 2 meters (Reference 6).

Some areas of the community which are protected from the 100-year flood by a levee have been delineated as having potential risk due to possible failure or overtopping of the levee during larger floods.

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For the streams studied by approximate methods only the 100-year flood plain boundary was delineated using topographic maps (Reference 6).

The 100-year flood plain boundary is shown on the Flood Boundary and Floodway Map. Small areas within the flood plain boundaries may lie above the flood elevations but cannot be shown due to limitations of the map scale and/or lack of detailed topographic data.

4.2 Floodways

Encroachment on flood plains, such as structures and fill, reduces the flood-carrying capacity, increases the flood heights and velocities, and increases flood hazards in areas beyond the encroachment itself. One aspect of flood plain management involves balancing the economic gain from flood plain development against the resulting increase in flood hazard. For purposes of the National Flood Insurance Program, a floodway is used as a tool to assist local communities in this aspect of flood plain management. Under this concept, the area of the 100-year flood plain is divided into a floodway and a floodway fringe. The floodway is the channel of a stream plus any adjacent flood plain areas that must be kept free of encroachment so that the 100-year flood can be carried without substantial increases in flood heights. Minimum Federal standards limit such increases to 1.0 foot, provided that hazardous velocities are not produced.

The floodways presented in this study were computed on the basis of equal conveyance reduction from each side of the flood plain. The results of these computations were tabulated at selected cross sections for each stream segment for which a floodway was computed and are presented in Table 7, Floodway Data.

As shown on the Flood Boundary and Floodway Map, the floodway boundaries were computed at cross sections. Between cross sections, the boundaries were interpolated. In cases where the floodway and the 100-year flood plain boundaries are either close together or collinear, only the floodway boundary has been shown.

The area between the floodway and the 100-year flood plain boundaries is termed the floodway fringe. The floodway fringe thus encompasses the portion of the flood plain that could be completely obstructed without increasing the water-surface elevation of the 100-year flood more than 1.0 foot at any point. Typical relationships between the floodway and the floodway fringe and their significance to flood plain development are shown in Figure 2.

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FLOODING SOURCE		FLOODWAY			BASE FLOOD WATER SURFACE ELEVATION			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQ. FEET)	MEAN VELOCITY (FEET/SEC.)	REGULATORY (FEET NGVD)	WITHOUT FLOODWAY (FEET NGVD)	WITH FLOODWAY (FEET NGVD)	INCREASE (FEET)
DEEP CREEK								
A	30470	1288	10,637	0.5	53.9	53.9	54.9	1.0
B	34670	1407	10,895	0.5	54.8	54.8	55.8	1.0
C	38600	620	3,349	1.6	56.2	56.2	57.2	1.0
D	40660	1369	8,636	0.6	57.3	57.3	58.3	1.0
E	42240	1470	11,207	0.5	57.7	57.7	58.7	1.0
LONGS BRANCH								
A	1390	140	176	4.7	54.9	54.9	55.9	1.0
B	1840	160	242	3.4	56.3	56.3	56.3	0.0
C	2410	394	2621	0.3	58.2	58.2	59.0	0.8
D	3420	152	621	1.3	58.3	58.3	59.3	1.0
KNIGHT SWAMP								
A	2125	210	224	5.4	56.2	56.2	57.2	1.0
B	3120	200	2,402	0.5	58.1	58.1	58.5	0.4
C	3360	416	2,969	0.4	59.7	59.7	60.4	0.7
D	4300	138	749	1.6	59.8	59.8	60.8	1.0

[1]Feet above mouth

TABLE 2

FEDERAL EMERGENCY MANAGEMENT AGENCY

TOWN OF SPEED, NC
(EDGECOMBE CO.)

FLOODWAY DATA

DEEP CREEK — LONGS BRANCH — KNIGHT SWAMP

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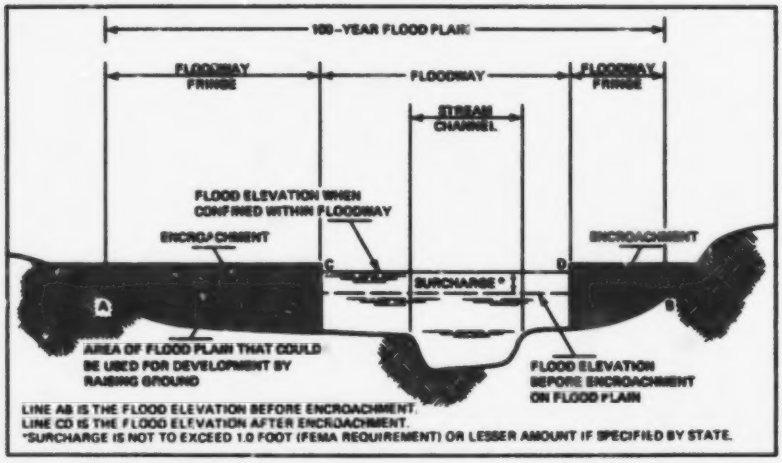
100-YEAR FLOOD PLAIN
FLOODWAY FRINGE
FLOODWAY
FLOODWAY FRINGE
STREAM CHANNEL
FLOOD ELEVATION WHEN CONFINED WITHIN FLOODWAY
ENCROACHMENT
ENCROACHMENT
C
D
SURCHARGE *
A
B
AREA OF FLOOD PLAIN THAT COULD BE USED FOR DEVELOPMENT BY RAISING GROUND
FLOOD ELEVATION BEFORE ENCROACHMENT ON FLOOD PLAIN
LINE AB IS THE FLOOD ELEVATION BEFORE ENCROACHMENT.
LINE CD IS THE FLOOD ELEVATION AFTER ENCROACHMENT.
*SURCHARGE IS NOT TO EXCEED 1.0 FOOT (FEMA REQUIREMENT) OR LESSER AMOUNT IF SPECIFIED BY STATE.

FIGURE 2 - Floodway Schematic

The floodways in this study are presented to local agencies as minimum standards that can be adopted directly or that can be used as a basis for additional floodway studies.

5.0 INSURANCE APPLICATION

To establish actuarial insurance rates, data from the engineering study must be transformed into flood insurance criteria. This process includes the determination of reaches, Flood Hazard Factors, and flood insurance zone designations for each flooding source studied in detail affecting the Town of Speed.

5.1 Reach Determinations

Reaches are defined as sections of flood plain that have relatively the same flood hazard, based on the average weighted difference in water-surface elevations between the 10- and 100-year floods. This difference may not have a variation greater than that indicated in the following table for more than 20 percent of the reach:

Average Difference Between 10- and 100-year Floods	Variation
Less than 2 feet	0.5 foot
2 to 7 feet	1.0 foot
7.1 to 12 feet	2.0 feet
More than 12 feet	3.0 feet

The locations of the reaches determined for the flooding sources of the Town of Speed are shown on the Flood Profiles and summarized in Table 3, Flood Insurance Zone Data.

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5.2 Flood Hazard Factors

The Flood Hazard Factor (FHF) is used to establish relationships between depth and frequency of flooding in any reach. This relationship is then used with depth-damage relationships for various classes of structures to establish actuarial insurance rate tables.

The FHF for a riverine reach is the average weighted difference between the 10- and 100-year flood water-surface elevations rounded to the nearest 0.5 foot, multiplied by 10, and shown as a 3-digit code. For example, if the difference between elevations is 0.7 foot, the FHF is 005; if the difference is 1.4 feet, the FHF is 015; if the difference is 5.0 feet, the FHF is 050. When the difference is greater than 10.0 feet, it is rounded to the nearest whole foot.

5.3 Flood Insurance Zones

Flood insurance zones and zone numbers are assigned based on the type of flood hazard and the FHF, respectively. A unique zone number is associated with each possible FHF and varies from 1 for a FHF of 005 to a maximum of 30 for a FHF of 200 or greater.

Zone A:	Special Flood Hazard Areas inundated by the 100-year flood, determined by approximate methods; no base flood elevations are shown or FHFs determined.
Zones A6, A8, A9:	Special Flood Hazard Areas inundated by the 100-year flood, determined by detailed methods; base flood elevations are shown, and zones subdivided according to FHFs.
Zone B:	Areas between the Special Flood Hazard Areas and the limits of the 500-year flood; areas that are protected from the 100- and 500-year floods by dike, levee, or other water control structure; or areas subject to certain types of 100-year shallow flooding where depths are less than 1.0 foot; and areas subject to 100-year flooding from sources with drainage areas less than 1 square mile. Zone B is not subdivided.
Zone C:	Areas of minimal flooding; not subdivided.

Flood elevation differences, FHFs, flood insurance zones, and base flood elevations for each flooding source studied in detail in the community are summarized in Table 3, Flood Insurance Zone Data.

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FLOODING SOURCE	PANEL[1]	ELEVATION DIFFERENCE[2] BETWEEN 1.0% (100-YEAR) FLOOD AND 10% (10-YEAR)	FLOOD HAZARD FACTOR	ZONE	BASE FLOOD ELEVATION[3] (FEET NGVD)
DEEP CREEK					
Reach 1	0005	4.7	045	A9	Varies
Reach 2	0005	3.0	030	A6	Varies
LONGS BRANCH					
Reach 1	0005	4.4	045	A9	Varies
KNIGHT SWAMP					
Reach 1	0005	4.0	040	A8	Varies

[1]FLOOD INSURANCE RATE MAP PANEL
[2]WEIGHTED AVERAGE IN FEET
[3]ROUNDED TO NEAREST FOOT

TABLE 3

FEDERAL EMERGENCY MANAGEMENT AGENCY

TOWN OF SPEED, NC
(EDGECOMBE CO.)

FLOOD INSURANCE ZONE DATA

DEEP CREEK — LONGS BRANCH — KNIGHT SWAMP

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5.4 Flood Insurance Rate Map Description

The Flood Insurance Rate Map for the Town of Speed is, for insurance purposes, the principal product of the Flood Insurance Study. This map contains the official delineation of flood insurance zones and base flood elevation lines. Base flood elevations show the locations of the expected whole-foot water-surface elevations of the base (100-year) flood. The base flood elevations and zone numbers are used by insurance agents, in conjunction with structure elevations and characteristics, to assign actuarial insurance rates to structures and contents insured under the National Flood Insurance Program.

6.0 OTHER STUDIES

A Flood Insurance Study has been completed for the Unincorporated Areas of Edgecombe County (Reference 7). Slight variations in the location of extraterritorial limits for Speed were noted. The maps for this study present more up-to-date corporate and extraterritorial limits for the town than those shown in the county study.

The COE has published two studies relating to Deep Creek (References 1 and 2). The two reports are in agreement with this Flood Insurance Study.

Due to its more detailed analysis, this Flood Insurance Study supersedes the previously printed Flood Hazard Boundary Map for the Town of Speed (Reference 8).

7.0 LOCATION OF DATA

Information concerning the pertinent data used in preparation of this study can be obtained by contacting the Natural and Technological Hazards Division, FEMA, 1371 Peachtree Street, NE., Suite 736, Atlanta, Georgia 30309.

8.0 REFERENCES AND BIBLIOGRAPHY

1. U.S. Army Corps of Engineers, Wilmington District, Deep Creek, Edgecombe County, North Carolina - Detailed Project Report, January 1976.

2. ————, Deep Creek, Edgecombe County, North Carolina - Floodways for Existing Conditions and Improved Conditions, March 1977.

3. U.S. Department of Commerce, Bureau of the Census, 1980 Census of Population, Number of Inhabitants, North Carolina, Washington, D.C., February 1982.

4. Haan, Charles T., Statistical Methods in Hydrology, Ames, Iowa, The Iowa State University Press, 1977.

5. U.S. Army Corps of Engineers, Hydrologic Engineering Center, HEC-2 Water-Surface Profiles Generalized Computer Program, Davis, California, November 1976.

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6. U.S. Geological Survey, 7.5 Minute Series Topographic Map, Scale 1:24000, Contour Interval 2 meters: Speed, North Carolina, 1981.

7. Federal Emergency Management Agency, Flood Insurance Study, Edgecombe County, Unincorporated Areas, North Carolina, August 1981.

8. U.S. Department of Housing and Urban Development, Federal Insurance Administration, Flood Hazard Boundary Map, Town of Speed, North Carolina, April 1976.

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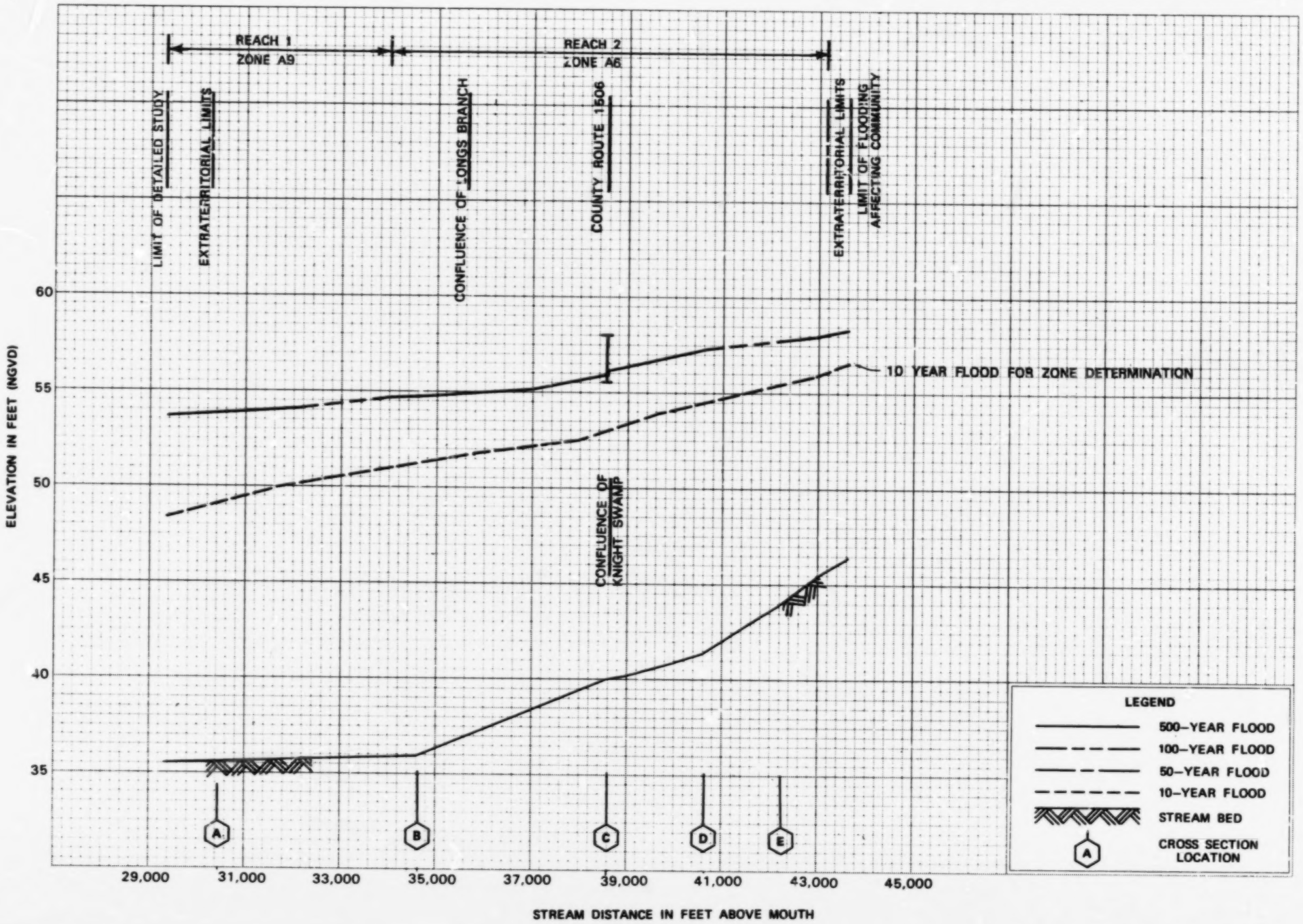

FLOOD PROFILES

DEEP CREEK

FEDERAL EMERGENCY MANAGEMENT AGENCY

TOWN OF SPEED, NC
(EDGECOMBE CO.)

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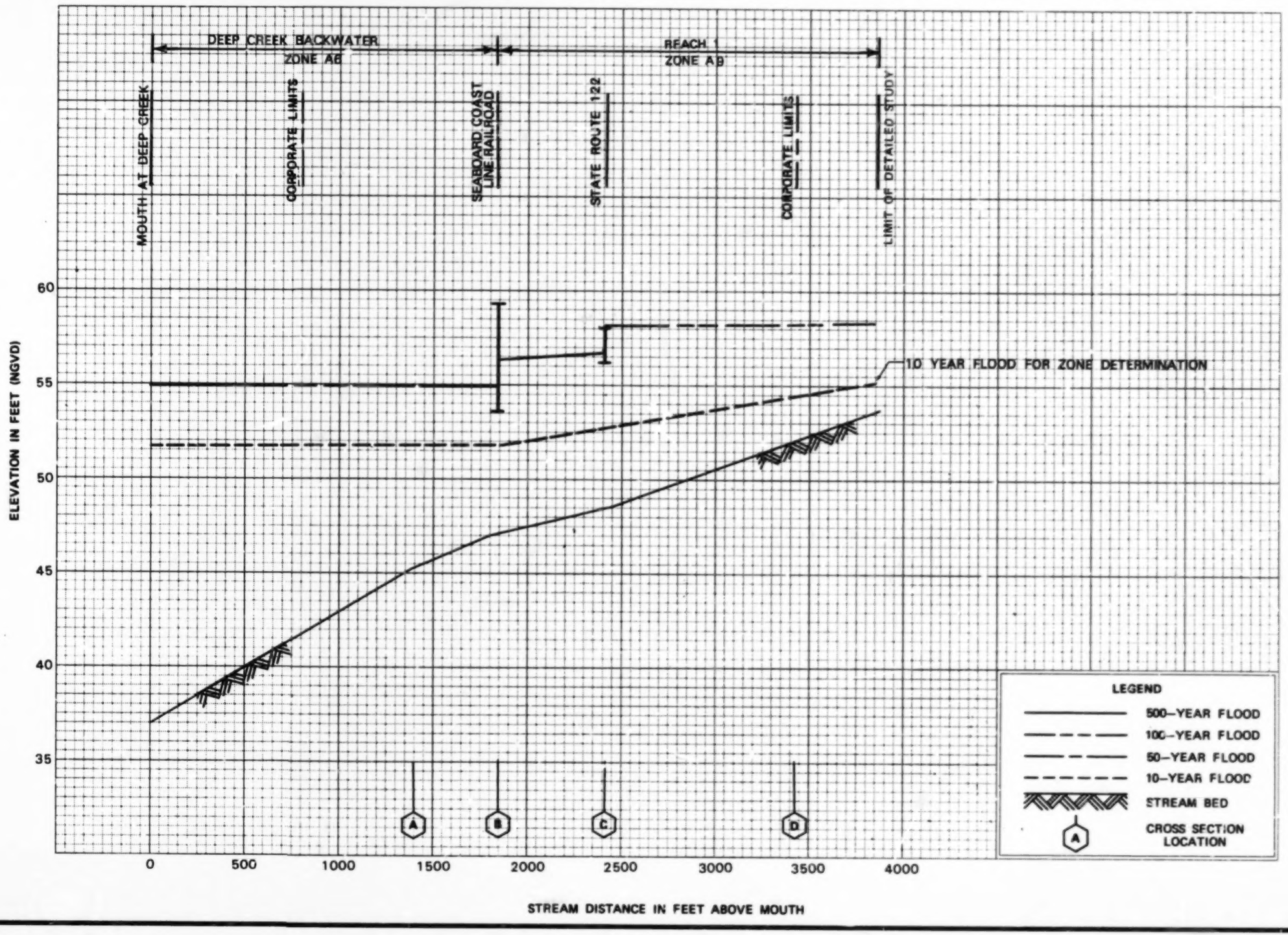

FLOOD PROFILES

LONGS BRANCH

FEDERAL EMERGENCY MANAGEMENT AGENCY

TOWN OF SPEED, NC
(EDGECOMBE CO.)

02P

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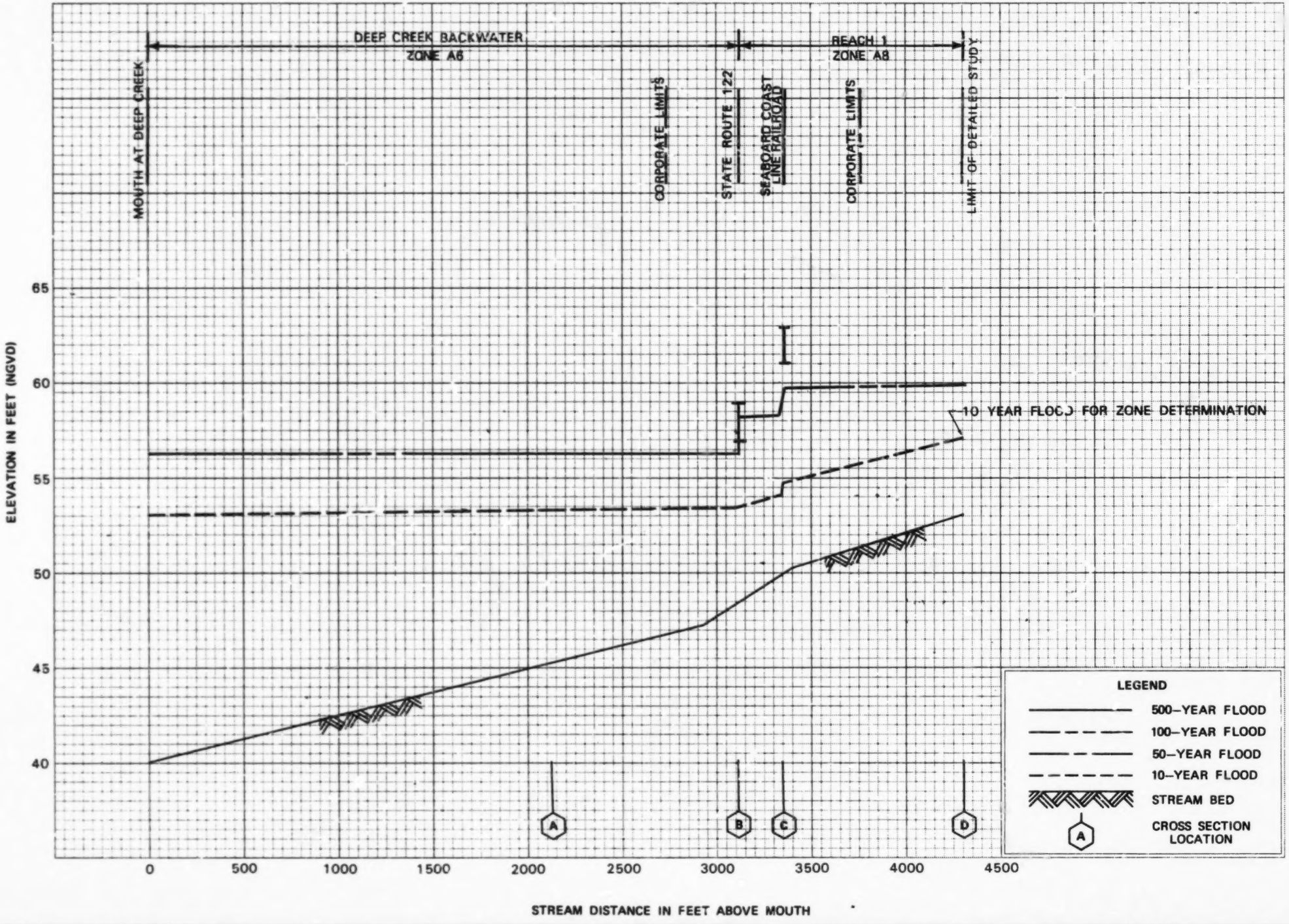

FLOOD PROFILES

KNIGHT SWAMP

FEDERAL EMERGENCY MANAGEMENT AGENCY

TOWN OF SPEED, NC
(EDGECOMBE CO.)

03P

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